

REMARKS

An Office Action was mailed on August 10, 2004. Claims 1-16 are pending, of which claim 1 is the sole independent claim.

Claims 4, and 6 are objected to for informalities.

Claim 4 has been amended to obviate the objection, which the Examiner is respectfully requested now to withdraw.

Applicant respectfully requests that the Examiner withdraw the objection to claim 6 in light of the arguments provided below for patentability and furthermore since claim 6 is a suitable limitation of claim 1. In the alternative, the Examiner is requested to withdraw the objection since the subject matter of the objection is not one of form as to which is proper for an objection. MPEP 706.02.

Claims 1-4, 6-9, 10, and 14-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,024,388 to Skoff. Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Skoff and in further view of U.S. Patent No. 4,670,736 to Ulrich. Claims 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Skoff and in further view of U.S. Patent No. 6,439,753 to Sumada et al.

The rejections are respectfully traversed and the Examiner is respectfully requested to withdraw the rejections for at least the grounds provided herein.

The presently claimed invention is a headlight-unit for single-track vehicles, such as, but not exclusively, motorcycles that provide better illumination during travel. Unlike two-track vehicles, operators of single-track vehicles negotiate a curve by inclining the vehicle. Corresponding to that inclination, the light pattern deviates from the ideal.

On a straightaway, motorcycle 1 has an illuminated area 4 (of the pavement or ground surface), which is in compliance with applicable regulations or safety recommendations. In the example provided in Figs. 1-3 and the specification at pg. 7, line 21 – pg. 8, line 11, the side closest to on-coming traffic is foreshortened while the side away from traffic is elongated. Fig 1. During

negotiation of left and right hand curves and experiencing an inclination "a" the illuminated area of the pavement or ground surface is area 5 and 6, which are substantially different than the ideal area 4. Figs. 2 and 3.

The present invention, as claimed in claim 1, includes

"a sensor-controlled correction device for the light-beam pattern generated by the dipped low beam, and

"at least one central headlight (23) for straight-ahead driving and with lateral headlights (22, 24), one disposed on the right and one on the left thereof, in that, for illumination in left-hand curves and for illumination in right-hand curves respectively, the right headlight (22) and the left headlight (24) respectively are mounted in such a way that they are turned downward around their optical axis by an angle (β) to compensate for inclination, thus causing the outside rims remote from the central headlight (23) to be out of horizontal orientation, and in that the correction device includes an electronic control unit, which turns on at least the central headlight (23) within a driving stretch for substantially upright driving and, during negotiation of curves, turns on at least either the left headlight (24) or the right headlight (22) upon passage through a minimum roll angle (α)."

Therein, claim 1 stands rejected despite that it is admitted that Skoff does not teach, nor does Skoff reasonably suggest, "[a] headlight unit whereby the illumination of left-hand curves and right-hand curves are operated by the right and left cornering headlights respectively, and wherein said cornering headlights are turned downward around their optical axis." Office Action, pg. 3. In fact, neither Skoff, nor any of the art cited or relied on teach or reasonably suggest such a headlight unit or the invention as claimed in claim 1.

Skoff discloses an illumination unit wherein "the illumination for cornering is provided through the addition of special lamps 11 and 13 of Fig. 2, associated with the right and left side respectively of the vehicle 15 for making right and left turns respectively . . ." Skoff, col. 5, lines 33-37.

Skoff further discloses “[cornering] lamps [that] may be affixed to the vehicle in any position consistent with applicable law. . .” Col. 7, lines 15-17. This is relied on to teach a skilled artisan the presently claimed invention. Applicant respectfully disagrees.

A careful reading further on in on the same section reveals a variety of possible mounting locations. Col. 7, lines 17-27. None of these suggest the presently claimed invention. Without the presently claimed invention as impermissible hindsight, neither Skoff nor a skilled artisan, would have a motivation to achieve “[a] headlight unit whereby the illumination of left-hand curves and right-hand curves are operated by the right and left cornering headlights respectively, and wherein said cornering headlights are turned downward around their optical axis.” Until the present application, Skoff and other skilled artisan, such as those of the related art, appear to solve the problem of cornering on a motorcycle by having a lamp affixed to the right side of the vehicle illuminate a right-hand turn and a lamp affixed to the left side of the vehicle illuminate a left turn. Applicant respectfully submits that the Examiner’s position that inwardly directed cornering light beams are a matter of preference is an assumption and should be withdrawn or, it is respectfully requested, be suitably supported in accordance and within the scope of, at least, MPEP 2144.03.

The present invention improves on the known art in unexpected ways and functions better than the heretofore state of the art.

Firstly, as described on page 3, lines 15-18 of the present application a “significantly improved illumination during negotiation of a curve, not only in the stretch of driving lane immediately ahead of the vehicle but also on the inside of the respective curve” is achieved by means of the inventive headlight unit. With the inventive cross-over illumination it is possible to illuminate both the driving lane in stretch of the vehicle and the inside of a curve by means of only one cornering headlight. Figs. 5 and 6 of the present invention.

In contrast, the cornering lights of Skoff are only able to illuminate the inside of a curve on their respective side as can be clearly seen in Figs. 2-5 of Skoff. This difference between the present application and the cited reference, Skoff, is a result of the presently claimed inventive features

wherein right curves and left curves respectively are illuminated by the left and right cornering headlight respectively.

Secondly, the headlight unit illuminating the curve is advantageously, while negotiating a curve, the highest (with respect to the driving lane) of the two cornering headlights that illuminates the driving lane, regardless whether it is a left-hand or right-hand curve. For a right-hand curve this can be clearly seen in Fig. 4, where the left cornering headlight 24 illuminating the driving lane is in a higher position than the right cornering headlight 22. Thus, in contrast to Skoff, the driving lane is always illuminated by the highest positioned cornering headlight thereby offering the largest possible illumination angle to the surface. Therefore, a better illumination pattern on the driving lane is achieved whereby the larger/steeper illumination angle is additionally able to prevent the blinding of oncoming traffic more effectively.

Skoff, in fact, teaches away from the inventive features. Skoff teaches cornering lights that illuminate the driving lane under a smaller flatter angle resulting in a higher risk for blinding oncoming traffic. This difference becomes important because Skoff addresses this important problem of dazzling or blinding other drivers by suggesting simplistically that the cornering lights are switched off, either automatically together with dimming or dipping of the headlight beam or by providing a manual on-off-switch for the cornering lights. (Skoff, column 8, lines 8-14).

Applicant respectfully submits that the presently claimed inventive headlight unit is superior over the prior art and was not obvious for a person skilled in the art. No cited reference is able to suggest the "cross-over" concept or the advantageous effects related with the inventive headlight unit.

In view of the remarks set forth above, applicant believes the application is in condition for allowance which action is respectfully requested. All dependent claims are allowable for at least the same reasons provided for the allowability of the independent claim from which they depend.

However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Charge any fee due with this paper to Deposit Account 50-1290.

Respectfully submitted,



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